STATE UNIVERSITY OF NEW YORK (SUNY) **PLATTSBURGH, USA**

CCL Client: Murnane Building Contractors
Engineer: Ryan Biggs + Clark Davis Engineering and Surveying P.C.
CP Consultant: Echem Consultants LLC

Cathodic protection was the preferred solution when corrosion was discovered in a pedestrian bridge and a podium slab at the State University of New York.

Rehabilitation of the structure was carried out in two phases. In phase 1, the affected area covered approximately 1500 – 1800 m^2 (5,000 – 6,000 ft^2) while phase 2 covered 6100 m^2 (20,000 ft^2).

Key to the successful installation on this project was the meticulous preparation in both phases. To carry out changes to the impressed current cathodic protection system, once installed, would prove costly.

Using GPR, CCL identified the location of existing reinforcement within the structural members. Holes of exactly 15.24 cm (6") and 22.86 cm (9") deep and 2.54 (1") in diameter were then drilled to accept the anodes. Precise location of the cavities was essential to avoid existing reinforcement and maintain the integrity of the structure. A total of 500 holes were drilled for phase 1, and 3,100 holes were drilled for phase 2. The wires connecting the anodes were installed in channels between the holes requiring 304.8 m (1,000 ft) of concrete to be chased out for phase 1 of the project and 1828.8 m (6,000 ft) for phase 2.

As each zone was connected, rigorous testing was carried out to ensure correct functionality before encapsulation. Testing completed, the holes were filled with a special grout. A titanium mesh was then placed over the system and a concrete topping slab 15.24 cm (6") in depth was cast.

After energising the system CCL will continue to check the installation on a monthly basis, while at the same time training in-house maintenance personnel at the University to monitor the system correctly. After one year the system will be handed over to the University.

Repair and Strengthening - CCL USA Inc
T: +617 338 0190 E: info@cclus.com W: www.cclint.com